REMARKS

This Response is in reply to the Final Office Action rejection mailed on July 26, 2007 and the Advisory Action mailed September 5, 2007. Claims 1 – 7 are pending in the application, with each of the claims being rejected.

Claims 1, 2, and 5 were rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent Application 2003/0058474 (hereinafter Loce) in view of *Print Quality Metrics for Grayscale Text* (hereinafter Farrell). Loce discloses a method and apparatus for use in an image forming device to select and apply halftone screens that are compatible with text components based on certain characteristics of the text. A text component characteristic recognizer ascertains characteristics of the text such as font specification, font size, predominant angle of the text, and whether the text is italicized or bold. This information is communicated to a halftone screen selector which selects a halftone screen based on one or more of the recognized characteristics. The selection of a halftone screen is accomplished using predetermined threshold values programmed into or stored within the halftone screen selector. Loce does not disclose that a user may input or change the predetermined threshold value.

Farrell discloses a study to evaluate the relationship between subjective ratings of print quality and two types of machine vision metrics. In general, machine vision systems utilize images obtained using optical sensors in order to process, analyze, and measure various characteristics so decisions can be made. The machine vision metrics studied were attribute metrics and image-based metrics. Attribute metrics include features that are known to affect print quality, such as optical ink density, jaggedness, and edge sharpness. Image-based metrics are based on the entire image and capture the perceptual similarity between a test sample and an offset print sample. The study involved subjective evaluation of print samples at various resolutions (dots per inch) and grayscale levels. The study concluded that the smaller

the edge jaggedness, the higher the perceived print quality. Also, the perceived print quality increased with increasing resolution and the introduction of grayscale filtering. Finally, the study found that there was no increase in perceived print quality with printer resolution and grayscale filtering and the measurement of edge sharpness.

Claim 1 has been amended to now include receiving a page description language (PDL) file that includes text and a text size value. A user-specified font sharpening threshold is provided, which is a separate value from the text size value. A previously established font sharpening threshold is overridden and the user-specified font sharpening threshold is substituted in its place. A comparison is made between the text size value and the user-specified font sharpening threshold. The use of a halftone screen is determined based on an outcome of the comparison. The text is then rendered either with or without the halftone screen based on the outcome of the comparison.

The Final Office Action states that Loce discloses a document created with an electronic authoring tool using a personal computer with the document including a text size specified by the user. A halftone screen is then selected based on this text size; thus, the text size functions as a user-defined font sharpening threshold. First, this characterization of Loce is erroneous. Paragraphs 0034 – 0041 of Loce detail the method disclosed to select a halftone screen. The method begins by determining a rendering quality related characteristic of a text component. This characteristic may be, for example, the text size. A halftone screen is then selected based on this characteristic. **In order to make this selection, then necessarily there must be one or more values (thresholds) that the characteristic is being compared to in order to make the selection.** Therefore, the Office Action is wrong when it states that the text size is the threshold value. If this were the case, then no comparison could be made because only one value (i.e., the text size) would exist. Claim 1 as amended specifies that the text size value and

the user-specified font sharpening threshold **are separate values and are then compared to one another**.

Second, even assuming that Loce discloses a text size and a previously established font sharpening threshold, Loce does not disclose overriding the previously established font sharpening threshold and substituting it with the user-defined font sharpening threshold. Loce discloses only that "the halftone screen selector or generator 818 either selects a screen from a database of available screens or generates a screen for halftoning a particular text component in real time." (Paragraph 0047). Nowhere does Loce teach or suggest overriding the previously established font sharpening threshold with a user-specified font sharpening threshold.

Ferrell is concerned with defining print quality metrics for use with machine vision systems. The machine vision systems measure characteristics of the text after the text is printed. Ferrell has nothing to do with selecting a threshold for determining the halftone screens used for printing. Therefore, Ferrell does not remedy any of the failings of Loce as detailed above.

For at least these reasons, independent claim 1 is not made obvious by Loce and Ferrell. The subject matter of dependent claim 2 has been incorporated into claim 1 and, therefore, claim 2 has been canceled.

Claim 5 has been amended to now include a printing system comprising a user interface, a rastor image processor, and a raster output device. The user interface is used for entering a user-specified font sharpening threshold. The rastor image processor generates a halftone image from a digital representation of objects to be printed. The objects include text, and the digital representation includes a text size value separate from the user-specified font sharpening threshold. The rastor image processor then selects a halftone screen based on overriding a previously established font sharpening threshold with the user-specified font sharpening threshold and then performing a comparison of the text size value with the user-

specified font sharpening threshold. As discussed above for claim 1, Loce does not disclose overriding the previously established font sharpening threshold with the user-specified font sharpening threshold.

For at least these reasons, claim 5 is not made obvious by Loce and Ferrell.

Claims 3, 4, 6, and 7 were rejected under 35 U.S.C 103(a) as being unpatentable over Loce in view of Ferrell in further view of U.S. Patent 7,079,287 (hereinafter Ng). Ng discloses methods for processing post rastor image processed gray level image data by subjecting the data to halftone screen processing, then analyzing each pixel of the halftone screen processed data to criterion to determine if the pixel is a saturated color image. With regard to dependent claims 3 and 4, Applicants note that the rejection relies primarily on Loce and Ferrell, and relies on Ng solely for details of the frequency of the halftone screens and user interface. However, as pointed out above, Loce and Ferrell do not disclose all of the limitations of independent claim 1 regarding overriding the previously established font sharpening threshold. Ng does not remedy the failings of Loce and Ferrell, nor does the Examiner assert otherwise. Therefore, the combination of Loce, Ferrell, and Ng, assuming such can be combined, fails to make a *prima facie* case of obviousness since the combination does not teach or suggest all the claim limitations. For at least these reasons, dependent claim 3 is not obvious over Loce, Ferrell, and Ng. Claim 4 has been canceled.

Similarly, independent claim 5 as amended specifies overriding the previously established font sharpening threshold and substituting it with the user-specified font sharpening threshold. As discussed above, the combination of Loce, Ferrell, and Ng does not teach or suggest all of the limitations of independent claim 5. For at least these reasons, dependent claims 6 and 7 are not obvious over Loce, Ferrell, and Ng.

In view of the above amendments and remarks, the Applicants submit that the present application is in condition for allowance and such action is respectfully requested. If any issues remain unresolved, the Applicant's attorney requests a telephone interview to expedite allowance and issuance.

Respectfully submitted,

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